

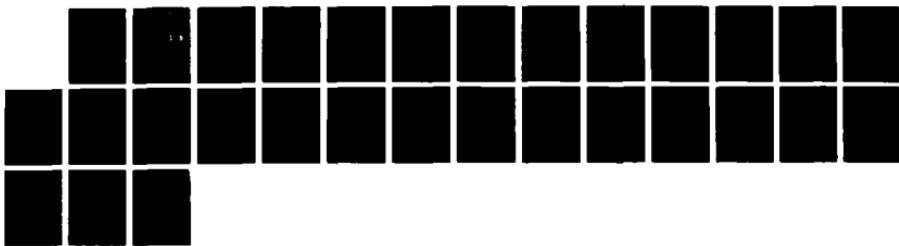
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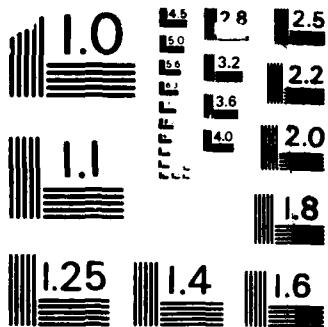
RESPONSIBILITY FOR SPARE-PARTS ACQUISITION(U) LOGISTICS 1/1
MANAGEMENT INST BETHESDA MD J F OLIO ET AL. JAN 84
LMI-ML327 MDA903-77-C-0370

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RESPONSIBILITY FOR SPARE-PARTS
ACQUISITION

January 1984

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John F. Olio
Frank W. Parsons

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FIELD	GROUP	SUB-GROUP												
19. ABSTRACT (Continue on reverse if necessary and identify by block number) Responsibility for developing spare-parts acquisition policy and monitoring program execution with the Office of the Secretary of Defense is split between the Under Secretary of Defense for Research and Engineering and the Assistant Secretary of Defense (Manpower, Installations and Logistics). The split, however, has not been defined in a systematic manner, nor at a level of detail that clearly establishes the responsibilities of the organizations of the two officials, resulting in overlaps and omissions.														
<p>This report</p> <ol style="list-style-type: none"> 1. Describes the various functions comprising the spare-parts acquisition process and documents the interrelationships among those functions. 2. Determines current assignments of spare-parts acquisition responsibilities for USDRE and ASD(MI&L) 														
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3. Recommends and specifies detailed assignments of spare-parts acquisition responsibilities to the USDRE and ASD(MI&L) to eliminate current overlaps and omissions.

RESPONSIBILITY FOR SPARE-PARTS ACQUISITION

Responsibility for developing spare-parts acquisition policy and monitoring program execution within the Office of the Secretary of Defense (OSD) is split between the Under Secretary of Defense for Research and Engineering (USDRE) and the Assistant Secretary of Defense (Manpower, Installations and Logistics) (ASD(MI&L)). The split, however, has not been defined in a systematic manner, nor at a level of detail that clearly establishes the responsibilities of the organizations of the two officials, resulting in overlaps and omissions.

In this report, we

1. Describe the various functions comprising the spare-parts acquisition process and document the interrelationships among those functions;
2. Determine current assignments of spare-parts acquisition responsibilities for USDRE and ASD(MI&L);
3. Recommend and specify detailed assignments of spare-parts acquisition responsibilities to the USDRE and ASD(MI&L) to eliminate current overlaps and omissions.

SPARE-PARTS ACQUISITION PROCESS

The process of acquiring spare parts starts during concept exploration, continues through the life cycle of a weapon system, and ends only when the weapon system is withdrawn from U.S. and friendly foreign government force structures. During this time, many diverse actions and decisions directly or indirectly have an impact upon spare-parts acquisition. For ease of discussion, we have divided the spare-parts acquisition process into six major categories: management plans; design development; data base development and update; requirements determination; procurement; and materiel status. Major actions or decision points in some of these categories occur throughout the

entire life cycle, while other categories are important only during specific phases of the life cycle.¹

Management Plans

Management plans are formal plans providing guidance and documenting the technical and supply management decisions made throughout the development, production, and deployment phases of a weapon system. Included in this category are the Integrated Logistics Support Plan (ILSP), the Maintenance Plan, the Initial (Interim) Support Plan, the Transition Plan, the Post-Production Support Plan, and the Termination Plan.

Design Development

The design development category consists of functions in which logistics support considerations affect the end-item design during the development phase of the weapon system acquisition process. Included in this category are life-cycle cost (LCC) trade-off studies and logistic support analysis (LSA). By means of the LCC trade-off studies, logistics considerations such as maintainability, reliability, and quality are continually traded off against proposed design characteristics of the weapon system throughout the development phase. The LSA process (1) ensures that individual logistics support elements (such as technical data, training, spares support, and facilities) are evaluated in a systematic manner as they affect maintainability, reliability, and quality and (2) documents the final design decisions applicable to each of the logistics support elements.

¹The focus of this report is on acquisition of weapon-system-related spare parts. However, it should be noted that, beyond the initial (interim) support period of a weapon system, the spares acquisition categories (except management plans and design development) apply equally to the acquisition of all secondary items. Secondary items not associated with the weapon system acquisition process include non-weapon-system-related hardware, general supply items, clothing and textiles, medical supplies, and fuel. Beyond the initial (interim) support period, support concerns for all categories of secondary items normally focus on individual line items rather than on weapon systems.

Data Base Development/Update

The decisions and actions in the first two categories culminate in the development of a data base that supports subsequent management of spare parts. The data base is continually updated to reflect current spare-parts demand and procurement actions. This category includes development and production drawings, technical documentation for provisioning, and the inventory control point (ICP) technical and inventory management data bases.

Requirements Determination

Requirements determination uses the inventory management segment of the data base in conjunction with models, algorithms, or other techniques to compute repairable and consumable spare-parts requirements during all phases of a weapon system's life cycle.

Procurement

The procurement category consists of functions necessary to obtain spare parts from industry. This category includes development of both the acquisition policy and the contracting instruments and techniques contained in the Federal Acquisition Regulation and the Defense Acquisition Regulation (FAR/DAR). Additional functions related to the management of the procurement operation, such as spare-parts breakout, procurement quantity determination, development of management systems, and multiyear procurement, are also included in this category.

Materiel Status

This last category includes all data systems that provide visibility of spare-parts inventories and materiel use throughout the life cycle of a weapon system. These data systems update the inventory management segment of the data base used in the requirements determination process to compute spare-parts requirements.

CURRENT RESPONSIBILITIES

The current split of responsibilities within OSD for the six categories of spare-parts acquisition functions during the various portions of a weapon system's life cycle is not explicit. DoD directives and instructions and personal interviews indicate the following general allocation of responsibilities:

- USDRE is responsible for the following:
 - design, development, and production of a weapon system and its associated spare parts.
 - technical data necessary for competitive procurement of spare parts.
 - spare-parts procurement policy.
- ASD(MI&L) is responsible for the following:
 - logistics support implications of weapon system design during the development phase.
 - management plans and systems that track the development and maintenance of logistics support capability, including spares support.
 - spare-parts support.

It is interesting to note that, among the OSD staff, the spare-parts acquisition process is generally viewed as a sequential process, with the USDRE responsible for the early stages and the ASD(MI&L) responsible for the later stages. There is little recognition that spares acquisition is an integrated process requiring participation of both OUSDRE and OASD(MI&L) throughout the entire life cycle. As a result, there is no concept of shared responsibility and not much interaction between the two groups during the development of policy.

RECOMMENDED RESPONSIBILITIES

In developing the recommended split of responsibilities, we used the following rationale:

- the OSD office developing the policy for a specific area should also be responsible for monitoring execution; there should be no split in responsibility between policy development and program monitoring.
- responsibility for specific areas within any of the six categories of the spares acquisition process may change as a weapon system moves through its life cycle.
- although one office--OUSDRE or OASD(MI&L)--should be assigned primary responsibility for a specific function, the other office may have a strong interest in that function and should be a partner in policy development and program monitoring.

Responsibilities for Spare-Parts Acquisition

We have developed an overview of the spares acquisition process (Attachment 1) and have color-coded it to delineate the recommended responsibilities of the USDRE and the ASD(MI&L). In developing these recommendations, we have assumed no significant changes in the current OUSDRE and OASD(MI&L) organizations. Attachment 1 segregates the spares acquisition process into the six categories discussed above and depicts the major functions having an impact upon spare-parts acquisition that occur in each category during the various portions of a weapon system's life cycle. While most functions are designated as the primary responsibility of either OUSDRE or OASD(MI&L), both offices should be involved in most functions, one as primary agent, the other supporting.

The recommendations are as follows:

- as the Defense Acquisition Executive, the USDRE should have primary responsibility for those functions that have a direct impact on weapon system design and production. These include LCC tradeoffs, development and production drawings, specifications, and drawings and other technical data describing individual spare parts. As the logistics support agent, the ASD(MI&L) should ensure that logistics support implications are considered during the development process.

- the USDRE should have primary responsibility for acquisition policy throughout the life cycle of the weapon system, including procurement of spare parts. However, the ASD(MI&L) should have a strong interest, since the implementation of acquisition policy significantly affects inventory investment levels and administrative costs at ICPs and/or stock points under his responsibility. Attachment 1 indicates that the responsibility for the procurement category is assigned to both the USDRE and the ASD(MI&L) when a weapon system reaches initial operating capability (IOC) or materiel support date (MSD). This category will be discussed in more detail in the spare-parts procurement section below.
- the ASD(MI&L) should have primary responsibility for the management plans and design development categories that affect logistics support, including the ILSP and the other maintenance, support, transition, and termination plans and the LSA Data process. Throughout the design process, the USDRE and the ASD(MI&L), together, should continually assess logistics support considerations that apply to the latest hardware configuration and document them in life-cycle cost studies and in the LSA data base.
- the ASD(MI&L) should have primary responsibility for the requirements determination category for nearly the entire life cycle. Sparing to availability and other requirements determination algorithms are ASD(MI&L) responsibilities applicable to the development, production, and deployment phases. The USDRE is responsible for spare-parts requirements only during the early phase of development, when requirements represent individual prototype engineering decisions rather than multiple end-item support decisions.

In Attachment 2, we provide more detailed recommendations for the assignment of responsibilities for the spare-parts acquisition process. That attachment also provides a comprehensive description of spare-parts acquisition functions and identifies the numerous interrelationships among those functions. In Attachment 3, we provide a list and a brief summary of current DoD directives and instructions containing policy guidance pertinent to the spare-parts acquisition process.

Responsibilities for Spare-Parts Procurement

Both the USDRE and the ASD(MI&L) have primary responsibilities (see Attachments 1 and 2) in the procurement category after IOC and/or MSD. During this phase of the life cycle, USDRE responsibilities are essentially technical, while ASD(MI&L) responsibilities are essentially managerial.

The USDRE technical responsibilities pertain to the development of contracting instruments and techniques, including contracts, agreements, and simplified purchase procedures. These instruments and techniques are designed to facilitate competition or to ensure that non-competitive procurements are administered adequately. The effectiveness of these instruments and techniques in enhancing competition hinges on the availability of adequate technical data obtained by using spare-parts breakout techniques, either during the design phase or at the time of reprocurement on a line-item basis.

The ASD(MI&L) managerial responsibilities pertain to the selection of appropriate contracting instruments and techniques to procure individual spare-parts requirements in an efficient and timely manner. The goals are to enhance competition and to minimize inventory investment levels and administrative costs while providing satisfactory response to customer materiel requirements. To achieve these goals, the ASD(MI&L) is concerned with striking a balance between costs and customer response through procurement management programs designed to reduce both administrative workload and unit costs of procured materiel.

These technical and management responsibilities support the following recommended split of responsibility for the procurement category subsequent to IOC/MSD:

- The USDRE should have primary responsibility for the following:
 - development of acquisition policy.
 - development of contracting instruments and techniques.
 - development of spare-parts breakout techniques, including obtaining adequate technical documentation during the design phase of the weapon system life cycle.
 - pricing, including an assessment of variances, reasonableness, and validation.

- The ASD(MI&L) should have primary responsibility for the following:
 - management of the technical data base, in support of the procurement operation, including application of spare-parts breakout techniques subsequent to ICP assumption of spare-parts support responsibility.
 - procurement quantity determination, including economic order quantities and annual buys.
 - management of the procurement operation, including selection of the applicable contracting instrument, development and administration of the management systems appropriate to quick-response, large-volume purchasing and large- and small-dollar-value buy requirements, multiyear procurements, consolidated buys, and determination of central vs. local procurement.

SUMMARY

We have recommended assigning policy development and program monitoring responsibilities to the USDRE and the ASD(MI&L) as shown in Attachments 1 and 2, for a more effective management of the spare-parts acquisition process. Primary responsibilities have been assigned to either the USDRE or the ASD(MI&L) for the functions within each of the six spare-parts acquisition categories, with the exception of the procurement category after IOC and MSD. We have identified the need to assign primary responsibilities for the procurement category during these phases to both the USDRE and the ASD(MI&L). Specific responsibilities are delineated in Attachment 2. The recommendations should be the basis for a memorandum of understanding between the USDRE and the ASD(MI&L) to formalize the split of responsibilities for the spare-parts acquisition process.

The assignment of responsibilities to the current organizations of the USDRE and the ASD(MI&L) explicitly covers all aspects of the spare-parts acquisition process. However, improvement of policy development and program monitoring requires recognition of the fact that the spare-parts acquisition

process is an integrated one with many complex interfaces and that it therefore requires better coordination between OUSDRE and OASD(MI&L) during all phases of the life cycle.

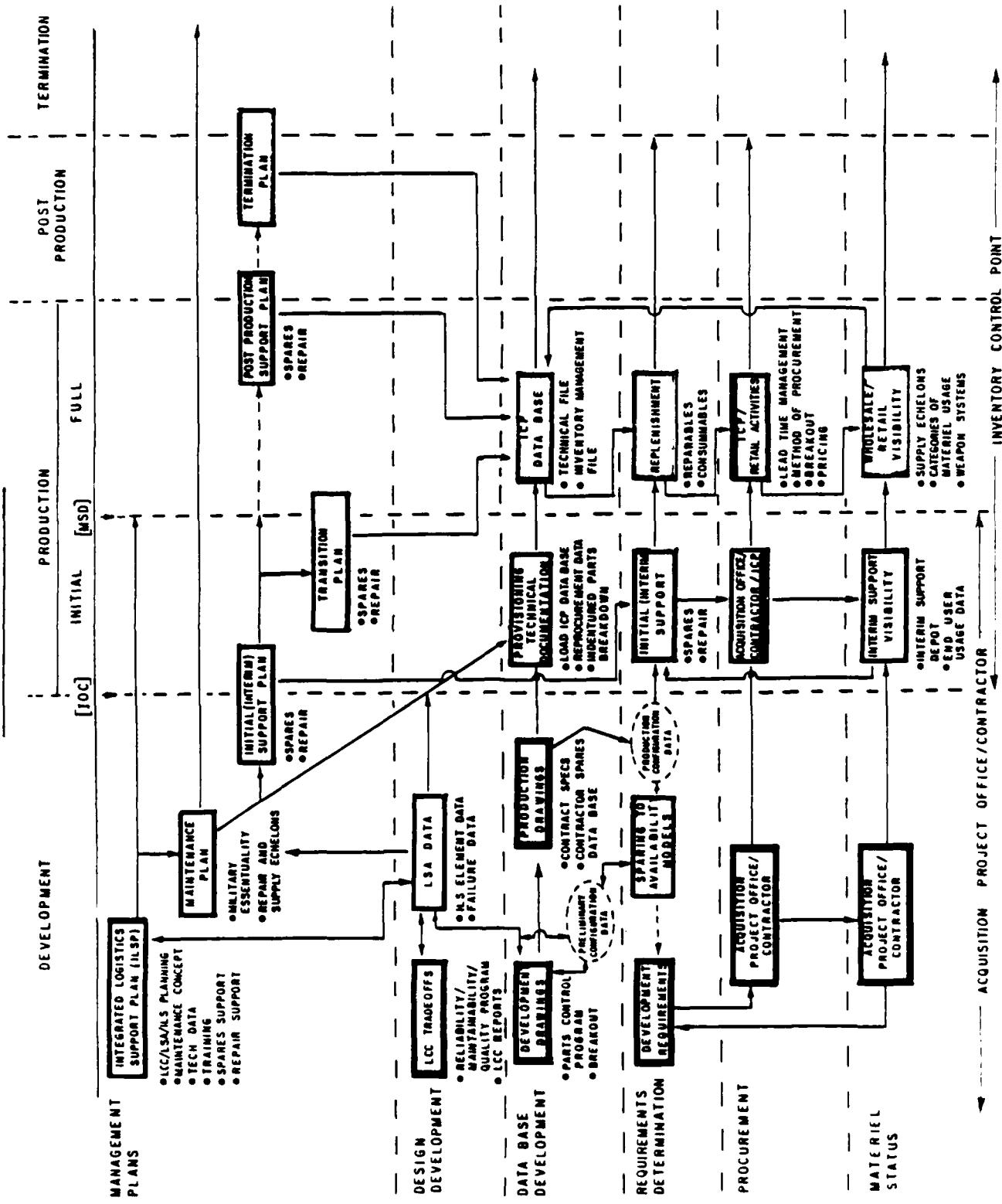
ADDENDUM

An alternative to dividing responsibilities between the current organizations of the USDRE and the ASD(MI&L) would be to reorganize the OSD staff to consolidate responsibilities for spare-parts acquisition functions under either the USDRE or the ASD(MI&L). A reorganization evaluation would require an analysis of all spare-parts acquisition categories shown in Attachment 1 and could not be limited solely to the spares procurement category. Such an evaluation would have to deal with the new interfaces created in both the weapon system and the spares acquisition processes and should recognize the functional transfers that might result from the reorganization now taking place in USDRE.

ATTACHMENT 1

SPARES ACQUISITION

SPARES ACQUISITION



ATTACHMENT 2

SPARE-PARTS ACQUISITION FUNCTIONS

SPARE-PARTS ACQUISITION FUNCTIONS

Function	Description	Policy	OSD Action Organization		
			USDRE Lead/ASD (MI&L)	ASD(MI&L) Lead/USDRE Program Interest	ASD (MI&L) Only
MANAGEMENT PLANS					
o <u>Integrated Logistic Support Plan (ILSP)</u>	<ul style="list-style-type: none"> - Life-Cycle Costs (LCC)/Logistics Support Analysis (LSA)/ILS Planning - Maintenance Concept - Tech Data - Training - Spares Support - Repair Support - Installation Support (including Test Equipment) - Software Support 	<ul style="list-style-type: none"> o Integrates the planning for all elements of logistic support for the end-item throughout the development and initial production phases; plans for the transition of logistics support management from the acquisition project office/contractor to the designated Military Department (MILDEP) and Defense Logistics Agency (DLA) inventory control points (ICPs). Includes (1) tracking the LCC/LSA interplay process (see "LCC Trade-off" and "LSA" under "Design Development" below), (2) scheduling and tracking ILS functions prior to Materiel Support Date (MSD) (see "Initial (Interim) Support Plan" and "Transition Plan" below), and (3) scheduling and tracking development of the documentation and automated products describing the maintenance concept and requirements for each ILS element, including spares support (see "Provisioning Technical Documentation (PTD)" below). Throughout the end-item development phase, the ILSP is reviewed and updated by the ILS Management Team (ILSMT), consisting of representatives from acquisition, contractor, logistics support, and field activity organizations. 		ASD (MI&L)	X
o <u>Maintenance Plan</u>	<ul style="list-style-type: none"> - Reparables - Consumables - Test Equipment - Military Essentiality - Repair & Supply Echelons - Failure Rates 	<ul style="list-style-type: none"> o Describes the maintenance concept for the end item; identifies the preventative and corrective maintenance requirements, test equipment requirements, and, for spares (reparables and consumables), the mission essentiality, repair levels (i.e., depot/intermediate/organizational), and failure data. These elements determine spares requirements. 		ASD (MI&L)	X
o <u>Initial (Interim) Support Plan</u>	<ul style="list-style-type: none"> - Spares - Repair 	<ul style="list-style-type: none"> o Describes the support concept and designates responsibility for spares and repair support from Initial Operating Capability (IOC)--completion of validation of the production configuration--to MSD, when responsibility for full spares support is transferred to the MILDEP and DLA ICPs (see "Initial (Interim) Support" under "Requirements Determination," "Acquisition Project Office/ICP" 		ASD (MI&L)	X

Function	Description	Policy	OSD Action Organization		
			USDRE Lead/ASD (MI&L)	ASD(MI&L) Lead/USDRE Program Interest	ASD (MI&L) Only
	under "Procurement" and "Interim Support Visibility" under "Materiel Status" below).				
o <u>Transition Plan</u>	o Describes actions required to transfer the logistics support responsibility from the acquisition project office/contractor to the MILDEP and DLA ICPs, including an accounting for spares and a plan for their distribution/disposition.	ASD (MI&L)		X	
- Spares					
- Repair					
o <u>Post-Production Support Plan</u>	o Describes the logistics support approach for the end item subsequent to delivery of the final production unit.	ASD (MI&L)		X	
- Spares					
- Repair					
o <u>Termination Plan</u>	o Describes actions required to ensure that all logistics support capability for the end-item is terminated in a coordinated manner.	ASD (MI&L)			X
DESIGN DEVELOPMENT					
o <u>Life-Cycle Cost (LCC) Trade-offs</u>	o Trades off RM&Q program parameters and LCC considerations; an iterative process as the design moves through the development phase towards the production configuration; supported by analytical capabilities such as spares optimization techniques (see "Sparing to Availability Models" below). Considerations of maintainability, reliability, and quality determine the frequency of demand, costs; and the level of repair; consequently, they determine spares inventory investment cost.	USDRE		X	
- Reliability/Maintainability and Quality (RM&Q) Program					
- LCC Reports					
o <u>Logistic Support Analysis (LSA)</u>	o Records the design development decisions affecting logistics support; provides a disciplined, automated mechanism for allowing spares support (and other ILS elements) considerations to affect the design decisions; the LSAR is the data base describing the production configuration for ILS purposes. From this data base inputs are provided to the individual ILS elements data bases (including spares) for subsequent MILDEP/DLA management purposes.	ASD (MI&L)		X	
- Logistics Support Analysis Record (LSAR)					
- ILS Element Input Data					
- Spares Failure Data					
DATA BASE DEVELOPMENT/UPDATE					
o <u>Development Drawings</u>	o Supports the contract specs as the record of the technical design during the development process; during the development phase, use	USDRE		X	
- Contract Specs (development)					
- Spares Breakout					

Function	Description	Policy	OSD Action Organization		
			USDRE Lead/ASD (MI&L)	ASD(MI&L) Lead/USDRE Program Interest	ASD (MI&L) Only
	<p>of the <u>Parts Control Program</u> seeks to maximize <u>common spares</u> as components in newly designed end items; <u>spare-parts breakout techniques</u> are applied to obtain the <u>technical data</u> for new items. The availability of adequate technical data enables future <u>competitive procurement</u>.</p>				
o <u>Production Drawings</u>	<ul style="list-style-type: none"> - Contractor Specs (production) - Contractor Spares Data Base - Prime/Original Equipment Manufacturer (OEM) Part #s - Defense Logistics Support Center (DLSC) Screen 	<ul style="list-style-type: none"> o Supports the <u>contract specs</u> as the record of the technical design in the production configuration; the <u>contractor's spares data base</u> is supported by the production drawings; <u>prime and/or OEM new-item part numbers</u> are screened through the Defense Logistics Support Center (DLSC) to ensure that National Stock Numbers (NSNs) already assigned are cited in spares support documentation. During an Interim Support phase, the contractor's spares data base and/or the LSAR is source for spares requirements determination (see "Sparing to Availability Models" and "Initial (Interim) Support" under "Requirements Determination" below). 	USDRE	X	
o <u>Provisioning Technical Documentation (PTD)</u>	<ul style="list-style-type: none"> - Production Drawings - LSA Output - Maintenance Plan Guidance - Reprocurement Data - Indentured Parts Breakdown - NSNs/Manufacturer's Part #s 	<ul style="list-style-type: none"> o Required to establish the <u>spares data base of the managing inventory control point (ICP)</u>; supported by the <u>spare production drawings</u>, the <u>contractor's spares data base</u>, and/or the LSAR; contains mission essentiality and repair data from the <u>Maintenance Plan</u>; NSNs obtained through the DLSC screen are included in the PTD. 	ASD (MI&L)	X	
o <u>ICP Data Base</u>	<ul style="list-style-type: none"> - Technical Data Base - Inventory Management Data Base 	<ul style="list-style-type: none"> o The <u>technical data base</u> includes a <u>description of the individual spare</u> for cataloging and <u>procurement description purposes</u>, relates the individual spare to an end-item (application data), provides an <u>indentured view of all spares supporting that end-item</u> (spares may be identified at the equipment, system, and/or weapon support level), and identifies <u>sources for procurement</u>. <p><u>Inventory Management Data Base</u> contains many data elements, such as <u>demand data, price, unit of issue, procurement history, repairable or consumable designation, and wholesale (and sometimes partial retail) inventory status (quantities on hand, on order, back-ordered,</u></p>	ASD (MI&L)		X

Function	Description	Policy	OSD Action Organization		
			USDRE	ASD(MI&L)	Lead/USDRE (MI&L)
REQUIREMENTS DETERMINATION					
o <u>Development Requirements</u>	etc.) <u>for each line item</u> . This data base supports the calculation of spares requirements (see "Requirements Determination" below).		USDRE		X
- Prototype vs Multiple End-Item Support					
o <u>Sparing to Availability Models</u>	During the <u>early phase of development</u> , repairs and/or design changes are made to a <u>minimum number of development model prototypes</u> (<u>end-items</u>) on an <u>as-needed basis</u> as part of the <u>end-item design process</u> ; therefore <u>spares requirements algorithms are not appropriate</u> .		ASD (MI&L)		X ¹
- LCC Trade-off Decisions					
- Time Frames (Mission Scenarios)					
- Spares Requirements Algorithms for Multiple End-item Support					
o <u>Initial (Interim) Support</u>	<u>Spares optimization algorithms may be appropriate during the development phase</u> as these algorithms can <u>usefully support the LCC trade-off process</u> by providing <u>rationalized spares costs</u> . During <u>the testing, production, and post-production phases</u> , sparing availability models can provide a <u>readiness-oriented optimization of spares requirements</u> in support of end-items, on a <u>single or multiple supply echelon basis</u> .		ASD (MI&L)		X ²
- Reparables					
- Consumables					
- Wholesale/Retail					
o <u>Interim spares requirements</u> (reparables and consumables) are computed using data from the LSAR or contractor spares data base; either the ICP, or the acquisition project office/contractor in conjunction with the ICP, computes requirements on the basis of a mutually agreeable spares computation algorithm. <u>Initial wholesale and retail spares requirements</u> are computed by the ICP using data from the PTD. Interim support (if used) commences at IOC and ends at MSD. Initial support commences at MSD. The <u>demand development period</u> may begin at either the IOC or the MSD.			ASD (MI&L)		X

¹Prior MSD.

²Subsequent to MSD.

Function	Description	Policy	OSD Action Organization		
			USDRE Lead/ASD (M&L)	ASD(M&L) Lead/USDRE Program Interest	ASD (M&L) Only
o <u>Replenishment</u>	o Supports all end-items subsequent to the demand development period; requirements are calculated for wholesale and retail (intermediate and consumer) levels and for special support such as war reserves, foreign military sales, etc.; relies upon techniques such as demand forecasting, repair-cycle management, Economic Order Quantity (EOQ) policy, procurement lead-time management, and wholesale/retail stocks to achieve spares support objective at the lowest overall dollar investment; uses levels setting and stratification techniques to identify requirements for budget and procurement purposes; uses supply effectiveness to measure performance. (If Sparring to Availability Models are used to calculate replenishment requirements, weapon system readiness indicators would be used to measure performance.) Determines the frequency of procurement requests).	ASD (M&L)			X
PROCUREMENT					
o <u>Acquisition Project Office/Contractor</u>	o During the development phase, spares procurements are accomplished by the contractor for the Acquisition Project Office, unless the item is identified as "Government-furnished materiel" (GFM), in which case it is obtained from the MILDEP or DLA logistics support system; contractor materiel procurement (known as "contractor-furnished materiel" (CFM)) is monitored by the acquisition project office as a line item under the end-item development contract; the contract document itself specifies the circumstances under which competitive or non-competitive procurement is justified.	USDRE		X	
o <u>Acquisition Project Office/ICP</u>	o Under an interim support concept spares procurements are normally the responsibility of the acquisition project office, although the ICP may also be involved; as during the development phase, materiel identified as GFM is obtained from the MILDEP or DLA logistics support system. During the initial support phase, the ICP procures the spares either directly from the end-item contractor/OEM with an ICP contract or indirectly from the contractor by using an end-item contract	ASD (M&L), USDRE	X	X	

Function	Description	OSD Action Organization		
		USDRE Lead/ASD (MI&L)	ASD(MI&L) Lead/USDRE	ASD (MI&L) Program Interest Only
	established by the acquisition project office; Spares Acquisition Integrated with Production (SAIP) may be used with both procurement methods.			
<ul style="list-style-type: none"> o <u>ICP/Retail Activities</u> <ul style="list-style-type: none"> - Line Item vs End-Item - Weapon-System-Related vs Non-Weapon-System-Related - Number of Procurement Actions - Breakout Techniques - Central vs Local Procurement - Responsiveness - Procurement Leadtimes and Cost 	<ul style="list-style-type: none"> o During the replenishment support phase, the procurement operations change significantly from earlier phases; procurement actions tend to be on a random line-item basis rather than conveniently planned and grouped by end-item; procurements are generated for all support items, including weapon-system-related and non-weapon-system-related spares, such as general supply items, clothing and textiles, and medical supplies; the number of procurement actions increases significantly; spare-parts breakout techniques are used to obtain technical data not previously obtained in the design phase to support competitive procurements; items may be procured by more than one organization (central procurement by the ICP and/or local procurement by local procurement activities); urgent customer requirements necessitate quick response; and the ability of the industrial base to respond to specific spares requirements is hampered as end-item production lines shut down, tending to increase procurement leadtimes and costs. 	ASD (MI&L)/ USDRE	X	X

The procurement category, commencing with IOC and/or MSD, is unique in that USDRE and ASD(MI&L) are both assigned primary responsibilities during these phases; USDRE responsibilities are technical in nature and include development of acquisition policy; development of contracting instruments; development of spare-part breakout techniques; value engineering to establish "should-cost" price; and validation of price reasonableness. ASD(MI&L) responsibilities are management oriented and include selection of the appropriate method of procurement to minimize inventory investments and administrative cost while providing satisfactory response to customer requirements and management of the procurement operation; ASD(MI&L) also manages other procurement-related items such as determination

Function	Description	OSD Action Organization			
		USDRE	ASD(MI&L)	Lead/USDRE (MI&L)	ASD (MI&L) Program Interest
Policy	Interest for Spares	Only			
	<p>of most cost-effective procurement quantities; and use of technical data and breakout techniques to maximize competitive procurement.</p> <p>Specific recommended responsibilities are as follows:</p> <ul style="list-style-type: none"> - Development of acquisition policy <ul style="list-style-type: none"> -- Federal Acquisition Regulation (FAR)/Defense Acquisition Regulation (DAR)/DoD FAR Supplement - Development of contracting instruments <ul style="list-style-type: none"> -- contracts -- agreements -- simplified purchase procedures - Development of spare-parts breakout techniques - Value engineering (should-cost) - Pricing <ul style="list-style-type: none"> -- variance -- reasonableness -- validation - Selection of proper contracting instrument for specific procurement action - Use of spare-parts breakout techniques to obtain technical data required to maximize competition - Procurement quantity determination <ul style="list-style-type: none"> -- EOQs -- Annual buys - Application of procurement techniques <ul style="list-style-type: none"> -- SAIP -- Multiyear contracting - Management of the procurement process <ul style="list-style-type: none"> -- quick-response techniques -- large- and small-dollar-value procedures -- central vs local procurement 	USDRE	X		
MATERIEL STATUS					
o <u>Acquisition Project Office/Contractor</u>	<ul style="list-style-type: none"> o <u>During the development phase</u>, as with procurement, materiel status is a contractor "in-house" accomplishment to provide materiel in support of development schedules. 	USDRE		X	
o <u>Interim Support Visibility</u>	<ul style="list-style-type: none"> o <u>During an interim support period</u>, materiel status is maintained by the contractor, frequently in conjunction with the ICP; user requirements may be forwarded directly to the contractor as a unique materiel support situation, or may be forwarded via the ICP as a normal materiel support situation. The contractor provides status of supply action for user requirements in a format directed by the ICP or the acquisition project office. The 	ASD (MI&L)		X	

Function	Description	Policy	OSD Action Organization		
			USDRE	ASD(MI&L)	Lead/USDRE (MI&L)
	contractor reports inventory status to the ICP and/or to the acquisition project office.		Lead/ASD (MI&L)	Program Interest	ASD Only
o <u>Wholesale/Retail Visibility</u>	<ul style="list-style-type: none"> - Pre-posting vs. Post-posting - Supply Echelons - Weapon Systems - Categories of Materiel Use 	<ul style="list-style-type: none"> o <u>Materiel status visibility subsequent to MSD</u> involves the collection of materiel demand or use data from the supply echelons. On-hand/on-order quantities, backorders, planned requirements, customer priorities, required delivery date, etc. are inputs to the requirements determination algorithms via the Inventory Management Data Base on a line-item basis. The correlation of <u>materiel status with maintenance reporting</u> determines to a significant degree the ability to accomplish requirements determination on a weapon system, or readiness, basis. 	ASD (MI&L)		X

ATTACHMENT 3

**SPARES ACQUISITION PROCESS - SUMMARY DESCRIPTIONS OF APPLICABLE
DoD DIRECTIVES AND INSTRUCTIONS**

SPARES ACQUISITION PROCESS - SUMMARY DESCRIPTIONS OF APPLICABLE
DoD DIRECTIVES AND INSTRUCTIONS

GENERAL

The following DoD directives and instructions, listed numerically, provide policy guidance regarding the spares acquisition process. The principal documents are DoDDs 4140.40 and 5000.39 and DoDI 4140.42. To a lesser extent, the other DoDDs listed also provide policy guidance; they are generally restricted, however, to particular aspects of the spares acquisition process. The descriptions of their subjects are limited to comments on spares acquisition.

<u>Subject</u>	<u>Action Office/Officer</u>	<u>Date</u>
DoDD/DoDI DoDI 4100.37	M&L (J. Marcus)	12 Nov 81
Retention and Transfer of Material Assets	USDRE (R. Kunihiro)	11 Jun 81
Provides secondary-item retention policy.	M&L (P. Judge)	9 Mar 81
DoD Parts Control Program		
Establishes MPCAGs that reduce life-cycle costs by promoting standardization of parts use during all stages of end-item acquisition.		
DoDI 4120.19		
The Federal Catalog System		
Establishes the Federal Catalog System. Specifies that guidelines provided in DoD 4100.38, Provisioning and Other Procurement Screening Manual, shall be applied in the acquisition process. States that USDRE shall develop/acquire the engineering and technical data required for new items entering the Federal Catalog System.		
DoDI 4130.2		
Asset Knowledge and Control of Secondary Items		
Provides for visibility via transaction and/or monthly reporting on high-demand reparables. Provides authority to redistribute secondary items.		
DoDI 4140.37	M&L (J. Reay)	7 Aug 69
Procurement Cycles and Safety Levels of Supply for Secondary Items		
Establishes policy on procurement cycles and safety levels at ICPs for "nonreparable secondary items." Provides basic mathematical functions and applications in an inventory model.	M&L (J. Reay)	17 Jul 70
DoDI 4140.39		

Continuation - Summary Descriptions

<u>DoD/DoDI</u>	<u>Subject</u>	<u>Action Office/Officer</u>	<u>Date</u>
DoDD 4140.40	<u>Provisioning of End Items of Materiel</u>	MI&L (J. Jivatode)	28 Jun 83
	Provides basic policy guidance on provisioning for initial support of end-items. Addresses in broad, yet precise terms the entire spectrum of provisioning. Includes procedural statements on interfaces with FMS, parts control, quality, reliability and maintainability, Provisioning Technical Documentation (PTD), Integrated Logistics Support Plans (ILSP), Spares Acquisition Integration with Production (SAIP), war-reserve requirements, interim contractor support, initial-requirements computation techniques, insurance items, life of type buys, commercial off-the-shelf support, etc. Specifies that ASD(MI&L) administers and implements the provisioning process.		
DoDI 4140.42	<u>Determination of Initial Requirements for Secondary Item Spare and Repair Parts</u>	MI&L (J. Jivatode)	7 Aug 74
	Provides stockage criteria and requirements determination methodology for secondary items, beginning with initial provisioning and continuing through the demand development period -- not to exceed two years. Provides formulas for wholesale and retail stockage levels, and an extensive glossary of provisioning terminology.		
DoDD 4151.1	<u>Use of Contractor and DoD Resources for Maintenance of Materiel</u>	MI&L (R. Mason)	15 Jul 82
	Provides policies and responsibilities on use of contractor and DoD resources for DoD materiel maintenance. Allows interim contractor support when organic capability cannot be provided at "minimal cost." Provides for contract maintenance until system design, reliability and maintainability, maintenance procedures, and training are stabilized. Establishes that initial contractor/organic support plans shall be a portion of ILS planning. Specifies the 70/30 ratio: organic vs. inorganic, with peacetime requirements being performed on a 40-hour workweek. Requires under responsibilities that MI&L review each ILS plan to determine adequacy of the maintenance concept and related plans and, when they are inadequate, recommend changes to the Acquisition Executive.		
DoDI 4151.12	<u>Policies Governing Maintenance Engineering within the DoD</u>	MI&L (A. Pugin)	19 Jun 68
	Provides maintenance engineering (ME) responsibilities to be performed by DoD components. During conceptual and acquisition phases, ME provides maintenance support concepts, plans, and experience data. Specifies that ME activities within the DoD components establish/provide final decisions on spares replacement factors during the provisioning process, including SMR coding.		

Continuation – Summary Descriptions

<u>DoDD/DoDI</u>	<u>Subject</u>	<u>Action Office/Officer</u>	<u>Date</u>
DoDD 5000.1	<u>Major System Acquisitions</u>	USDRE (M. Reinhard)	29 Mar 82
	Provides a DoD statement of acquisition policy for major systems, and major modifications of existing systems. Establishes the DSARC process. Specifies that USDRE will ensure integration of the acquisition process with PPBS. Outlines USDRE responsibilities including policy on research, engineering development, procurement, and production of major systems. States that MIL is responsible for logistics, facility construction, manpower planning for new systems, and for ensuring that logistics planning is consistent with system hardware parameters, logistics policies, and readiness objectives.		
DoDI 5000.2	<u>Major System Acquisition Procedures</u>	USDRE (M. Reinhard)	8 Mar 83
	Provides procedures for the DSARC process.		
DoDI 5000.33	<u>Uniform Budget/Cost Terms and Definitions</u>	ASD(C) (G. Christie)	15 Aug 77
	Establishes uniform budget and cost terminology, including detailed descriptions of the Work Breakdown Structure (WBS) elements. Defines program acquisition and life-cycle costs.		
DoDD 5000.34	<u>Defense Production Management</u>	USDRE (T. Baldwin)	31 Oct 77
	Establishes policy and assigns responsibilities for production management. Addresses assessment of production risks early in the acquisition cycle, life-cycle cost reductions, enhanced reliability and maintainability, standardization, industrial preparedness, etc.		
DoDD 5000.39	<u>Acquisition and Management of Integrated Logistic Support for Systems and Equipment</u>	MIL (M. McGrath)	17 Jan 80
	Establishes Integrated Logistics Support (ILS) as an inherent part of major system acquisitions. Provides policy statements on basis for ILS planning, Logistics Support Analyses requirements, and the responsibilities of the program manager for ILS. Specifies that MIL is responsible for issuance of policy and guidance on ILS and exercises policy and operational control. Also specifies that USDRE(DAE) reviews adequacy of trade-offs between performance and support-related design goals.		
DoDD 5000.40	<u>Reliability and Maintainability</u>	USDRE (R. Stimson)	8 Jul 80
	Establishes policies and responsibilities for the reliability and maintainability (R&M) of defense systems. Addresses R&M through each of the acquisition phases. Specifies that (a) USDRE is responsible for R&M of systems, subsystems, and equipment through all phases of the acquisition process, and (b) ASD(MIL) is responsible for application of R&M system parameters in logistic support plans, and for correction of operational R&M deficiencies caused by support concepts; also to ensure that trade-offs are made to determine an optimum mix of R&M versus alternative logistics support concepts.		

Continuation - Summary Descriptions

<u>DoDD/DoDI</u>	<u>Subject</u>	<u>Action Office/Officer</u>	<u>Date</u>
DoDI 5010.12	<u>Management of Technical Data</u>	USDRE (J. Richardson)	5 Dec 68
	Establishes a Tech Data Management Program. Specifically addresses the many uses of tech data to include cataloging, item entry control, maintenance actions, and procurement, and stresses the importance of acquiring sufficient data to support these uses. Establishes the Contract Data Requirements List system.		
DoDD 5124.1	<u>Assistant Secretary of Defense (Manpower, Installations and Logistics)</u>	ASD(C) (A. Ehlers)	12 Jan 84
	Provides responsibilities, functions, and authorities for ASD(MIL&L). Addresses, under functions, MIL&L's DSARC role, repair, overhaul etc. of equipment and secondary items, Post-production support, and supply management. Does not specifically address MIL participation in the spares acquisition process; participation can be inferred under the DSARC function.		
DoDD 5129.1	<u>Under Secretary of Defense for Research and Engineering</u>	ASD(C) (A. Ehlers)	29 Nov 78
	Provides responsibilities, functions, and authorities for USDRE. States that USDRE is responsible for development and acquisition of weapon systems. Under functions, USDRE is responsible for design and engineering including life-cycle considerations, development, and acquisition of weapon systems, including procurement policy and production planning.		

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